

No.



8100085

# THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

**Barenbrug Holland B.V.**

Whereas, THERE HAS BEEN PRESENTED TO THE  
**Secretary of Agriculture**

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED NOVEL VARIETY OF SEXUALLY REPRODUCED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF *eighteen* YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. THE UNITED STATES SEED OF THIS VARIETY (1) SHALL BE SOLD BY VARIETY NAME ONLY AS CERTIFIED SEED AND (2) SHALL CONFORM TO THE NUMBER OF GENERATIONS PROVIDED BY THE OWNER OF THE RIGHTS. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

TALL FESCUE

'Barcel'

In Testimony Whereof, I have hereunto set  
my hand and caused the seal of the Plant  
Variety Protection Office to be affixed  
at the City of Washington  
this 15th day of July in  
the year of our Lord one thousand nine  
hundred and eighty-two.

Attest:

*Kenneth H. ...*

Acting  
Commissioner  
Plant Variety Protection Office  
Grain Division  
Agricultural Marketing Service

*John R. Block*  
Secretary of Agriculture







EXHIBIT AOrigin and Breeding History of the variety BARCEL.

Origin : Material collected in old pastures in the Netherlands in 1959.

Breeding History : BARCEL tall fescue is a 13-clone synthetic variety.  
The clones were chosen on the basis of clonal performance.

Clonal propagules of the 13 parental clones were established in a replicated, isolated crossing block for the production of Syn I (clonal) seed.

Breeders seed is produced in an isolated spaced-plantnursery from the progeny of Syn I. Foundation increase fields must be established from Breeders seed.

Certified production fields from Breeders- or Foundation seed.

No objectionable off-type plants or variants have been observed during reproduction and multiplication of this variety.



ADDITION TO EXHIBIT AStability of BARCEL:

BARCEL is tested at the R.I.V.R.O., Wageningen and at I.N.R.A., France for distinctness, uniformity and stability.

If one of these subjects is not satisfactory, Plant Breeders Rights will not be granted.

BARCEL has got Plant Breeders Rights in the Netherlands at January 19, 1981.

BARCEL is registered and put on the National List in France at February 1981.

Both results are obtained by field trials whereas 50 plants from 2 subsequent generations are measured for ear-emergence, flagleaf width and length, plant height, length of upper node and panicle length.

No significant differences between two generations were observed.

Variants

No objectionable variants were observed in the test for uniformity.

All measured characteristics fall within the normal Gauss distribution.

As those observations are done at 50 plants, the frequency of variants - if any - falling outside the range, will be less than 2 %.

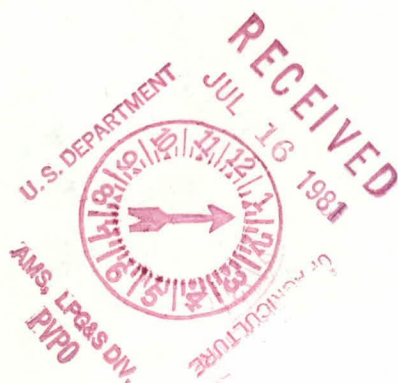




EXHIBIT BNovelty Statement of the variety BARCEL.

BARCEL is bred from material originally collected in nature.  
The variety is clearly to distinct from other varieties like FESTAL and BARUNDI.

The differences between BARCEL and FESTAL are more precisely:

- The maturety (50 % headed) is 2 days later than FESTAL.
- The width of the flag leaf is 0.6 mm narrower and the length is 9 mm longer.
- The plant height is 63 mm shorter.
- The length above the highest stem node is 51 mm shorter.
- Stemforming in year of sowing is the half of FESTAL.
- The leaf color is lighter green.

Differences with BARUNDI:

- The width of the flag leaf is 0.4 mm wider and the length is 11 mm longer.
- The plant height is 53 mm taller.
- The length above the highest stem node is 41 mm longer.
- The panicle is 26 mm longer.
- Stemforming in year of sowing is about twice as much.
- The leaf color is darker green.

BARCEL will be protected in the Netherlands very soon (about January 1981).  
The technical report of the official registration department is positiv for distinctness, uniformity and stability.

BARCEL is already on the recommended list of varieties in Switzerland.





## INSTRUCTIONS

**GENERAL:** Send an original copy of the application and exhibits, at least 2,500 viable seeds, and \$500 fee (\$250 filing fee and \$250 examination fee) to U.S. Dept. of Agriculture, Agricultural Marketing Service, Livestock, Poultry, Grain and Seed Division, Plant Variety Protection Office, National Agricultural Library Building, Beltsville, Maryland 20705. (See section 180.175 of the Regulations and Rules of Practice.) Retain one copy for your files. All items on the face of the form are self-explanatory unless noted below.

### ITEM

- 5 Give the date the applicant determined that he had a new variety based on (1) the definition in section 41(a) of the Act and (2) the date a decision was made to increase the seed.
- 13a Give: (1) the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method; (2) the details of subsequent stages of selection and multiplication; (3) the type and frequency of variants during reproduction and multiplication and state how these variants may be identified and (4) evidence of uniformity and stability.
- 13b Give a summary statement of the variety's novelty. Clearly state how this novel variety may be distinguished from all other varieties in the same crop. If the new variety most closely resembles one or a group of related varieties: (1) identify these varieties and state all differences objectively; (2) attach statistical data for characters expressed numerically and demonstrate that these differences are significant; and (3) submit, if helpful, seed and plant specimens or photographs of seed and plant comparisons clearly indicating novelty.
- 13c Fill in the Exhibit C, Objective Description form, for all characteristics for which you have adequate data.
- 13d Describe any additional characteristics that are not described, or whose description cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the description of characteristics that are difficult to describe, such as, plant habit, plant color, disease resistance, etc.
- 14a If "YES" is specified (seed of this variety be sold by variety name only as a class of certified seed) the applicant may NOT reverse his affirmative decision after the variety has either been sold and so labeled, his decision published, or the certificate has been issued. However, if the applicant specified "NO," he may change his choice. (See section 180.16 of the Regulations and Rules of Practice.)
- 15a See section 42 of the Plant Variety Protection Act and section 180.7 of the Regulations and Rules of Practice.





# APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

INSTRUCTIONS: See Reverse.

No certificate for plant variety protection may be issued unless a completed application form has been received (5 U.S.C. 553).

1a. TEMPORARY DESIGNATION OF VARIETY BAR Fa 77-1		1b. VARIETY NAME BARCEL		FOR OFFICIAL USE ONLY PV NUMBER <b>8100085</b>	
2. KIND NAME Tall fescue		3. GENUS AND SPECIES NAME Festuca arundinacea		FILING DATE 3/31/81	TIME 11:30 <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">A.M.</span> P.M.
4. FAMILY NAME (BOTANICAL) Gramineae		5. DATE OF DETERMINATION December 17, 1976		FEE RECEIVED \$ 500.00 \$ 250.00	DATE 3/31/81 3/2/82
6. NAME OF APPLICANT(S) Barenbrug Holland B.V.		7. ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code) Postbox 4 6800 AA Arnhem, The Netherlands		8. TELEPHONE AREA CODE AND NUMBER	
9. IF THE NAMED APPLICANT IS NOT A PERSON, FORM OF ORGANIZATION: (Corporation, partnership, association, etc.) Corporation		10. IF INCORPORATED, GIVE STATE AND DATE OF INCORPORATION Netherlands		11. DATE OF INCORPORATION 1904	
12. NAME AND MAILING ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS: Barenbrug Breeding MERIDIAN, Idaho 83642 Tel. 208-8887154 2000, East Victory Road U.S.A., Attn.: Mr. Fred Ledebøer					

13. CHECK BOX BELOW FOR EACH ATTACHMENT SUBMITTED:

- ☒ 13A. Exhibit A, Origin and Breeding History of the Variety (See Section 52 of the Plant Variety Protection Act.)
- ☒ 13B. Exhibit B, Novelty Statement.
- ☒ 13C. Exhibit C, Objective Description of the Variety (Request form from Plant Variety Protection Office.)
- ☐ 13D. Exhibit D, Additional Description of the Variety.

14a. DOES THE APPLICANT(S) SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED? (See Section 83(a). (If "Yes," answer 14B and 14C below.)		<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
14b. DOES THE APPLICANT(S) SPECIFY THAT THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS?	14c. IF "YES," TO 14B, HOW MANY GENERATIONS OF PRODUCTION BEYOND BREEDER SEED?		
<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	<input checked="" type="checkbox"/> FOUNDATION <input checked="" type="checkbox"/> REGISTERED <input checked="" type="checkbox"/> CERTIFIED		
15a. DID THE APPLICANT(S) FILE FOR PROTECTION OF THIS VARIETY IN OTHER COUNTRIES? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO (If "Yes," give name of countries and dates.)			
Netherlands 18-12-1976 Western Germany 1-12-1977			
15b. HAVE RIGHTS BEEN GRANTED THIS VARIETY IN OTHER COUNTRIES? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO (If "Yes," give name of countries and dates.)			
Netherlands 4-2-1981			

16. DOES THE APPLICANT(S) AGREE TO THE PUBLICATION OF HIS/HER (THEIR) NAME(S) AND ADDRESS IN THE OFFICIAL JOURNAL?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
17. The applicant(s) declare(s) that a viable sample of basic seed of this variety will be furnished with the application and will be replenished upon request in accordance with such regulations as may be applicable.	
The undersigned applicant(s) is (are) the owner(s) of this sexually reproduced novel plant variety, and believe(s) that the variety is distinct, uniform, and stable as required in Section 41, and is entitled to protection under the provisions of Section 42 of the Plant Variety Act.	
Applicant(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.	
3-12-1980	(DATE)

**BARENBRUG HOLLAND B.V.**

R.I.V.R.O.

Tall fescue, November 1980

DATE OF EAR- EMERGENCE IN THE SECOND YEAR	FLAGLEAFWIDTH	NARROW	RATHER BROAD	B R O A D	
	STEMLENGTH STEMFORMING IN THE YEAR OF SOWING	LONG	LONG	LONG	VERY LONG
VERY EARLY	MUCH		RABA	ARONDE	
	VERY MUCH				LUMINA
EARLY	RATHER MUCH				S 170
	MUCH				BELONA
MID- EARLY					
LATE	MUCH			ORINO	FESTAL TALLMO
VERY LATE	LITTLE		BARUNDI		
	RATHER MUCH	MONACO	BARCEL		
	MUCH		BARRIET		





See attached sheet 1, which is a scheme of the registered tall fescue varieties in the Netherlands.

The resemblance with the variety BARUNDI is clearly visible for all characteristics mentioned.

The resemblance with FESTAL is less striking but there is some with respect to date of ear-emergence.

In the official registration report is stated:

BARCEL most closely resembles BARRIET and BARUNDI, but differs from BARUNDI by a longer panicle and from BARRIET by a longer stem. (These differences are significant.)

The basis of taking FESTAL and BARUNDI as reference varieties is a pure practical one. The Institute chooses one variety to which the new variety is most closely related (BARUNDI) and one old variety of which already a lot of data of many years are available (FESTAL).

The resemblance of BARCEL with BARUNDI and BARRIET is for the following characteristics: ear-emergence, flagleaf, stemlength and stem-forming in the year of sowing. (All measurements are done in the second year!)

#### Leafcolour

This characteristic is based on visual observation and therefore difficult to objectivate.

On a 1 - 9 scale with 9 is darkest, the average figures are:

BARUNDI	5
BARCEL	7
FESTAL	8

LSD's at P=5% of the numerical data as stated in Exhibit B.

Flag leaf width : 0.31 mm

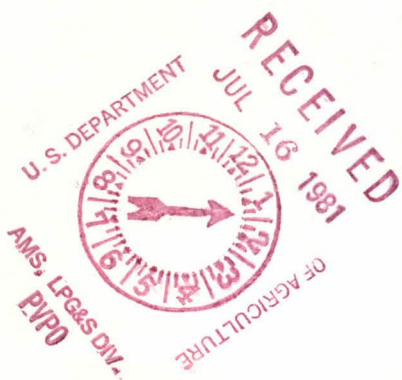
Flag leaf length : 2.16 mm

Plant height : 37.4 mm

Highest stem internode length : 30.7 mm

Panicle length : 20.3 mm

If there are any more questions, please feel free to ask us for more information.





## ADDITION TO EXHIBIT B

Date for BARCEL and BARUNDI  
(means of 50 plants)

OBSERVATION YEARS	BARCEL	BARUNDI	CHARACTERISTIC
'78 '79 '80	5.5 5.8 5.6 } 5.6	5.3 5.3 5.1 } 5.2	flag leaf width in mm
'78 '79 '80	126 140 130 } 132.0	129 121 130 } 126.7	plant height in cm
'78 '79 '80	55.9 55.5 46.5 } 52.6	51.7 52.1 41.8 } 48.5	length above highest stem node in cm
'78 '79 '80	23.4 20.8 18.9 } 21.0	20.9 18.1 16.1 } 18.4	panicle length in cm

It is not possible to obtain all the data per plant.  
So we hope this information will be sufficient.

RECEIVED

JAN 20 1982

U.S. DEPARTMENT



AAMS, LPG&S DIV.

PPVPO

## 8. LEAF BLADE:

<input type="text" value="0"/> ANTHOCYANIN: 0 = ABSENT 1 = PRESENT	<input type="text" value="0"/> HAIRS (BASAL): 0 = ABSENT 1 = PRESENT	<input type="text" value="2"/> MARGINS: 1 = SMOOTH 2 = SEMI-ROUGH 3 = ROUGH
<input type="text" value="1"/> <input type="text" value="6"/> <input type="text" value="8"/> mm LENGTH (FIRST LEAF FROM FLAG LEAF)	<input type="text" value="5"/> <input type="text" value="6"/> mm WIDTH	
<input type="text" value=""/> <input type="text" value=""/> mm SHORTER THAN <input type="text" value=""/> <input type="text" value=""/>	<input type="text" value="0"/> <input type="text" value="6"/> mm NARROWER THAN <input type="text" value="1"/> <input type="text" value="5"/>	
LENGTH SAME AS <input type="text" value=""/> <input type="text" value=""/>	WIDTH SAME AS <input type="text" value=""/> <input type="text" value=""/>	
<input type="text" value="1"/> <input type="text" value="1"/> mm LONGER THAN <input type="text" value="1"/> <input type="text" value="6"/>	<input type="text" value="0"/> <input type="text" value="4"/> mm WIDER THAN <input type="text" value="1"/> <input type="text" value="6"/>	

## 9. LEAF SHEATH (Plant Base):

<input type="text" value="1"/> COLOR: 1 = WHITE (HIGHLIGHT) 2 = RED	<input type="text" value="1"/> AURICLE HAIRINESS: 0 = ABSENT 1 = PRESENT
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## 10. PANICLE (Mature plant)

<input type="text" value=""/> <input type="text" value=""/> <input type="text" value=""/>	NUMBER OF PANICLES PER PLANT (FIRST YEAR OF PRODUCTION - FALL OR SPRING PLANTING SPECIFY _____)
<input type="text" value="2"/> <input type="text" value="1"/> <input type="text" value="0"/> mm LENGTH	<input type="text" value=""/> <input type="text" value=""/> <input type="text" value=""/> GRAMS OF SEED PER PANICLE
<input type="text" value="0"/> <input type="text" value="3"/> mm SHORTER THAN <input type="text" value="1"/> <input type="text" value="5"/>	<input type="text" value=""/> <input type="text" value=""/> GRAMS LESS SEED THAN <input type="text" value=""/> <input type="text" value=""/>
LENGTH SAME AS <input type="text" value=""/> <input type="text" value=""/>	WEIGHT SAME AS <input type="text" value=""/> <input type="text" value=""/>
<input type="text" value="2"/> <input type="text" value="6"/> mm LONGER THAN <input type="text" value="1"/> <input type="text" value="6"/>	<input type="text" value=""/> <input type="text" value=""/> GRAMS MORE SEED THAN <input type="text" value=""/> <input type="text" value=""/>
<input type="text" value="2"/> SHAPE: 1 = NARROW-TAPERING 2 = EGG SHAPE 3 = OBLONG 4 = OTHER (SPECIFY) _____	
<input type="text" value="1"/> TYPE: 1 = OPEN 2 = INTERMEDIATE 3 = COMPACT	
<input type="text" value="2"/> HABIT: 1 = ERECT 2 = NODDING	
<input type="text" value="2"/> BRANCHES: 1 = SMOOTH 2 = ROUGH	
<input type="text" value="2"/> COLOR (At 50% flowering): 1 = YELLOWISH GREEN 2 = GREEN 3 = BLUISH GREEN 4 = PURPLISH 5 = REDDISH 6 = OTHER (SPECIFY) _____	

## 11. PALEA:

<input type="text" value="0"/> HAIRS (ON KEELS): 0 = ABSENT 1 = SHORT (OLDS) 2 = LONG (RAINIER)
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## 12. LEMMA:

<input type="text" value="0"/> HAIRS: 0 = ABSENT 1 = PRESENT	<input type="text" value="2"/> TEXTURE: 1 = SMOOTH 2 = ROUGH
<input type="text" value="7"/> <input type="text" value="0"/> mm LEMMA LENGTH	<input type="text" value=""/> <input type="text" value=""/> mm LEMMA WIDTH
<input type="text" value=""/> <input type="text" value=""/> mm SHORTER THAN <input type="text" value=""/> <input type="text" value=""/>	<input type="text" value=""/> <input type="text" value=""/> mm NARROWER THAN <input type="text" value=""/> <input type="text" value=""/>
LENGTH SAME AS <input type="text" value="1"/> <input type="text" value="6"/>	WIDTH SAME AS <input type="text" value=""/> <input type="text" value=""/>
<input type="text" value=""/> <input type="text" value=""/> mm LONGER THAN <input type="text" value=""/> <input type="text" value=""/>	<input type="text" value=""/> <input type="text" value=""/> mm WIDER THAN <input type="text" value=""/> <input type="text" value=""/>
<input type="text" value="1"/> AWNS: 0 = ABSENT 1 = PRESENT	
<input type="text" value="0"/> <input type="text" value="2"/> mm AWN LENGTH	



U.S. DEPARTMENT OF AGRICULTURE  
AGRICULTURAL MARKETING SERVICE  
GRAIN DIVISION  
HYATTSVILLE, MARYLAND 20782  
**OBJECTIVE DESCRIPTION OF VARIETY**  
**FESCUE**  
(*Festuca* spp.)

NAME OF APPLICANT(S) Barenbrug Holland B.V.	VARIETY NAME OR TEMPORARY DESIGNATION BARCEL
ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code) P.O. Box 4 6800 AA Arnhem, Netherlands	FOR OFFICIAL USE ONLY PVPO NUMBER 8100085

Place the appropriate number that describes the varietal character of this variety in the boxes below. Place a zero in first box (e.g. 089 or 09 ) when number is either 99 or less or 9 or less. Characteristics described, including numerical measurements, should represent those that are typical for the variety. Ranges may be given also. Measured data should be for SPACED PLANTS. Royal Horticultural Society or any recognized color fan may be used to determine plant colors; designate system used: . Describe location of test area Wolfheze (Arnhem)-  
All questions need not be answered, however, completeness should be striven for in order to establish the most adequate Variety Identification. Netherlands

**1. SPECIES: (With comparison varieties for use below - use varieties within species of application variety)**

- |                        |  |              |                     |                |                  |              |
|------------------------|--|--------------|---------------------|----------------|------------------|--------------|
| <input type="text"/> 1 | 1 = F. ARUNDINACEA (TALL)              | 11 = ALTA    | 12 = FAWN           | 13 = GOAR      | 14 = KENTUCKY 31 | 15 = Festal  |
|                        | 2 = F. PRATENSIS (MEADOW)              | 21 = ENSIGN  | 22 = TRADER         |                |                  | 16 = Barundi |
|                        | 3 = F. RUBRA SSP. COMMUTATA (CHEWINGS) | 31 = CASCADE | 32 = HIGHLIGHT      | 33 = JAMESTOWN |                  |              |
|                        | 4 = F. RUBRA SSP. RUBRA (RED)          | 41 = BOREAL  | 42 = PENNLAWN       | 43 = DAWSON    |                  |              |
|                        | 5 = F. OVINA VAR. OVINA (SHEEP)        |              |                     |                |                  |              |
|                        | 6 = F. LONGIFOLIA (HARD)               | 61 = DURAR   | 62 = BILJART (C-26) | 63 = SCALDIS   |                  |              |
|                        | 7 = OTHER (SPECIFY) F. _____           |              |                     |                |                  |              |

**2. CYTOLOGY**

4	2
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 2n CHROMOSOME NUMBER**3. ADAPTATION: (0 = Not Tested; 1 = Not Adapted; 2 = Adapted)**

<input type="text"/> 0	NORTHEAST	<input type="text"/> 0	SOUTHEAST	<input type="text"/> 0	NORTH CENTRAL	<input type="text"/> 0	PACIFIC N.W.	<input type="text"/> 2	OTHER (SPECIFY) <u>Western Europe</u>
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**4. MATURITY: (50% Headed) Give Test Area Netherlands**

<input type="text"/>	<input type="text"/>	DAYS EARLIER THAN . . . . .	<input type="text"/>	<input type="text"/>	} COMPARISON VARIETY
		MATURITY SAME AS . . . . .	<input type="text"/>	<input type="text"/>	
<input type="text"/>	<input type="text"/>	DAYS LATER THAN . . . . .	<input type="text"/>	<input type="text"/>	

**5. PLANT HEIGHT: (At maturity to top of panicle)**

<input type="text"/>	<input type="text"/>	<input type="text"/>	cm	HEIGHT		
<input type="text"/>	<input type="text"/>	<input type="text"/>	mm	SHORTER THAN . . . . .	<input type="text"/>	<input type="text"/>
				HEIGHT SAME AS . . . . .	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	mm	TALLER THAN . . . . .	<input type="text"/>	<input type="text"/>

**6. GROWTH HABIT (Mature)**

<input type="text"/> 1	1 = ERECT (KENTUCKY 31)	2 = SEMI-ERECT (HIGHLIGHT)	3 = PROSTRATE
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**7. RHIZOMES**

<input type="text"/>	<input type="text"/>	mm LENGTH	<input type="text"/>	<input type="text"/>	mm WIDTH
<input type="text"/> 0	0 = ABSENT	1 = WEAKLY CREEPING (DAWSON)	2 = STRONGLY CREEPING (BOREAL)	3 = OTHER	_____

**8. LEAF BLADE:**

<input type="text"/> 3	COLOR:	1 = LIGHT GREEN (GOLFRUOD)	2 = MODERATELY LIGHT GREEN (HIGHLIGHT)	3 = MEDIUM GREEN (JAMESTOWN, KENTUCKY 31)	
		4 = DARK GREEN (CASCADE)	5 = BLUEGREEN	6 = GRAYGREEN	7 = OTHER (SPECIFY) _____

## 12. LEMMA:

<input type="text"/>	<input type="text"/>	mm SHORTER THAN	<input type="text"/>	<input type="text"/>	} COMPARISON VARIETY
<input type="text"/>	<input type="text"/>	LENGTH SAME AS	<input type="text"/>	<input type="text"/>	
<input type="text"/>	<input type="text"/>	mm LONGER THAN	<input type="text"/>	<input type="text"/>	

## 13. SEED:

<input type="text"/>	<input type="text"/>	<input type="text"/>	mm LENGTH	<input type="text"/>	<input type="text"/>	mm WIDTH
<input type="text"/>	<input type="text"/>	<input type="text"/>	mm SHORTER THAN	<input type="text"/>	<input type="text"/>	mm, NARROWER THAN
<input type="text"/>	<input type="text"/>	<input type="text"/>	LENGTH SAME AS	<input type="text"/>	<input type="text"/>	WIDTH SAME AS
<input type="text"/>	<input type="text"/>	<input type="text"/>	mm LONGER THAN	<input type="text"/>	<input type="text"/>	mm WIDER THAN
<input type="text"/>	<input type="text"/>	<input type="text"/>	GRAMS PER 1000 SEED	<input type="text"/>	<input type="text"/>	
<input type="text"/>	<input type="text"/>	<input type="text"/>	GRAMS LESS THAN	<input type="text"/>	<input type="text"/>	
<input type="text"/>	<input type="text"/>	<input type="text"/>	WEIGHT SAME AS	<input type="text"/>	<input type="text"/>	
<input type="text"/>	<input type="text"/>	<input type="text"/>	GRAMS MORE THAN	<input type="text"/>	<input type="text"/>	

## 14. DISEASE, INSECT, AND NEMATODE (0 = Not Tested, 1 = Susceptible, 2 = Resistant):

<input type="text"/> 2	<u>HELMINTHOSPORIUM VAGANS</u>	<input type="text"/> 0	<u>H. SOROKINIANUM</u>	<input type="text"/> 2	<u>H. DICTYOIDES</u>
<input type="text"/>	<u>RHIZOCTONIA SOLANI</u>	<input type="text"/> 2	<u>ERYSIPE GRAMINIS</u>	<input type="text"/> 0	<u>USTILAGO STRIIFORMIS</u>
<input type="text"/> 2	<u>FUSARIUM NIVALE</u>	<input type="text"/> 0	<u>F. ROSEUM</u>	<input type="text"/> 0	<u>TYPHULA IOTANA</u>
<input type="text"/> 2	<u>PUCCINIA GRAMINIS</u>	<input type="text"/>	<u>P. STRIIFORMIS</u>	<input type="text"/>	<u>P. POAE-NEMORALIS</u>
<input type="text"/> 2	<u>P. CORONATA</u>	<input type="text"/>	<u>PYTHIUM ULTIMUM</u>	<input type="text"/> 2	<u>CORTICIUM FUSCIFORME</u>
<input type="text"/>	<u>SCLEROTINIA HOMEOCARPA</u>	<input type="text"/> 0	INSECT _____	<input type="text"/> 0	NEMATODE _____
<input type="text"/>	OTHER _____	<input type="text"/>	OTHER _____	<input type="text"/>	OTHER _____

## 15. GIVE VARIETY OR VARIETIES THAT MOST CLOSELY RESEMBLE THE APPLICATION VARIETY. For the following characteristics indicate degree of resemblance (D.R.) by placing in the column marked, D.R., one of the following numbers:

1 = Application variety is less than comparison variety

2 = Same as

3 = More than, better, greater, darker, more disease resistant, etc.

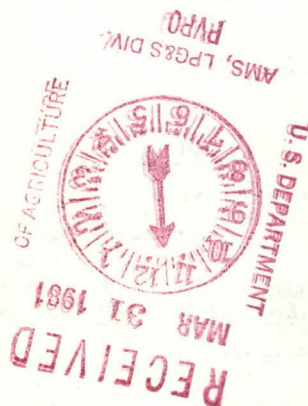
CHARACTER	VARIETY	D.R.	CHARACTER	VARIETY	D.R.
RHIZOME LENGTH			GROWTH HABIT	BARUNDI	3
LEAF WIDTH	FESTAL - BARUNDI	1-3	LEAF COLOR	FESTAL - BARUNDI	1-3
PANICLE COLOR	BARUNDI	2	PANICLE SHAPE		
WINTER COLOR	FESTAL - BARUNDI	2-2	COLD INJURY	KENTUCKY 31	3
SHADE TOLERANCE			HEAT		
DROUGHT			DISEASE*		
stemforming in year of sowing	FESTAL - BARUNDI	1-3	heading date	FESTAL - BARUNDI	3-2
			length above the highest node	FESTAL - BARUNDI	1-3

\*Specify each disease evaluated.



**16. ADDITIONAL DESCRIPTION:** (Use additional sheets as required)

Describe all characteristics that cannot be adequately described in the form above. Comparative varieties should be used as may be appropriate, such as for disease. Append all comparative trial and evaluation data, including measured characters, environmental, and disease tests.



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